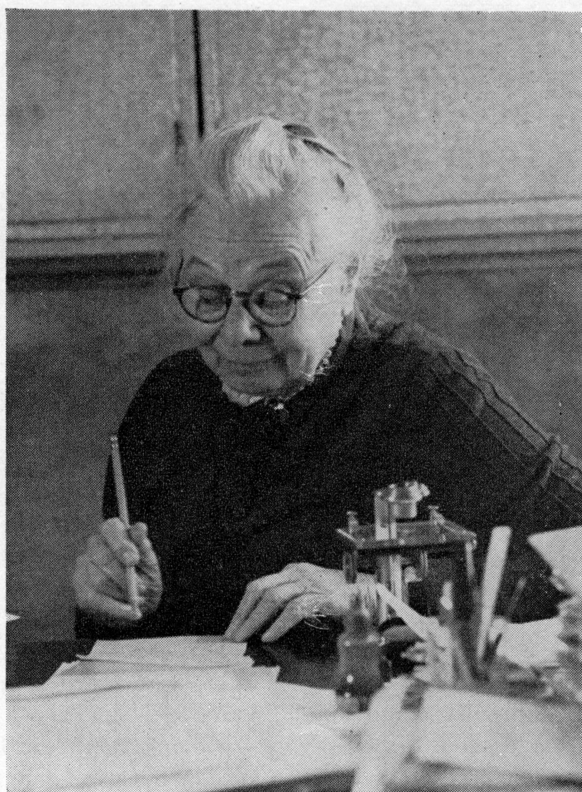


THE route to her work, in those long-ago years, ran down a cobbled street of a San Francisco hill. Other pedestrians hurried to leave that steep thoroughfare behind. Yet this strangely acting woman loitered, stooping to peer intently at the rocky paving, notebook in hand. Sometimes she dropped to her knees, looking into the gutter. Passing San Franciscans gave her a pitying glance

In time a scientific journal carried a learned article on the flora of the Nob Hill cobblestones, signed by Alice Eastwood. Today, 57 years later, this recently "retired" curator of botany at the California Academy of Sciences still finds absorbing interest in a blade of grass, a weed, or a towering redwood. After nearly a lifetime studying flora of all kinds, and simultaneously winning fame as one of America's foremost scientists in her field, this little, white-haired woman still is awed by the "pyramiding wonders of Nature."

On her 90th birthday, at the insistence of friends, Miss Eastwood announced she was quitting her Academy position. But nearly every morning since then she has trotted briskly up to her old second-floor laboratory in an Academy building of San Francisco's Golden Gate Park, and has worked as hard as ever. Staff members are not surprised. "She'll still be doing it at 100," they say. The only concession to her age is a 15-minute nap after lunch and a taxi ride to and from her home, five miles away. Every minute lost from her life's mission disturbs her because "there's so much to be done."

"I've found the greatest imaginable pleasure and comfort in botany. Excitement, too," she says, blue eyes twinkling



COURTESY PACIFIC DISCOVERY

Alice Eastwood at her desk.

Alice Eastwood, Hardy Perennial

By NELSON VALJEAN

After graduating from the East Denver High School, she underwent the broadening experience of teaching an almost unbelievable variety of high school subjects for the next ten years—Greek and Roman history, Latin, chemistry, bookkeeping, astronomy, physiology, zoology and drawing.

behind horn-rimmed glasses. "Why, identifying botanical specimens or unravelling the tiniest riddle of Nature is as thrilling as solving the greatest detective mystery on earth. To put it another way, one of the continuous marvels of our complex, high-speed age is such a simple thing as the germination of a grain of wheat or the unfolding of a rose bud."

Born in Toronto, Canada, January 19, 1859, Miss Eastwood developed her first interest in plants when she moved as a girl to the flower-wonderland of Denver, Colorado. There, during school vacations, she walked over the picturesque hills, her mind dwelling more and more upon the rioting verdure. Before long she had pumped her teachers dry of their botanical learning. Soon the knowledge-thirsting girl was classifying flowers by herself, listing many little-known and neglected species.

Experience in art-work served her especially well in later life when called upon to picture plant specimens for publication.

Gradually her vacation trips lengthened until she had covered practically all Colorado and southeastern Utah. Usually, by preference, she traveled alone, seeking protection at night under some shrub or the branches of a tree. On most trips she dressed for comfort, but on one occasion, preparing to go with another botanist and a minister to a hikers hotel, she laughed at the au-

California Academy of Science building after the 1906 fire.

COURTESY PACIFIC DISCOVERY



Alice Eastwood's trips seeking new plants for the Academy collection carried her far afield.

dacity of a sudden inspiration.

"I always liked to travel light," she says. "Hated to carry luggage. So I put my nightgown in my bustle. No one dreamed, when we rested, that I was sitting on my suitcase."

Another day she was paid an unexpected call by a visiting Englishman, Alfred Russel Wallace, the famous naturalist who independently and simultaneously arrived at many of the same conclusions as Charles Darwin, and for whom the sea belt known as Wallace's Line was named. Would she go botanizing with him? She would, and did, and their climb up Graymount provided memories of his wisdom that still live like springtime. Now she knew for certain she would always follow botany.

In 1891, on a visit to California, she accepted temporary work with the California Academy of Sciences, then in downtown San Francisco. A year later she returned there to become curator of botany at \$75 a month, but often she dug into her own pocket to help pay assistants. And she continued to live her own life, little caring what others thought. In wet weather, she wore short skirts, a fearless innovation in those days.

Meanwhile, she was overhauling the botanical department—systematizing routine, alphabetizing the files, having lightweight, easily moved specimen cases constructed, "just in case of fire." It seemed almost that she foresaw the coming holocaust of 1906.

When the quake shook the city that year, Miss Eastwood refused to be panicked. Calmly she went from her home to the sidewalk in front of the California Academy of Sciences, on Market Street near Fourth. The front stairway was in semi-ruins; rubble was everywhere. Her first real pangs struck swiftly. What of her specimens—her wonderful plant specimens—up there on the sixth floor!

A male acquaintance, arriving on the run, helped her cross the debris on a scantling. There was a glimmer of hope. While the stairway marble had buckled and cracked, enough metal was showing near the bannister, she thought, to accommodate her small feet. She started climbing, crabwise, holding to the railing, rejoicing at endurance developed on mountain trips. Sometimes there was hardly room for a toehold. Chunks of marble came loose, crashed. Her shoes were scuffed to dinginess. She could hear pandemonium outside.

Finally, breath-taking minutes later, she was on the



sixth floor. From the window she could see flames only a block away. Fire-fighters, on the roof of the nearby mint, were battling falling sparks. But her specimens were safe!

Moving methodically, she shifted and opened the specimen cases, and gave thanks for their lightness. Swiftly she ransacked the more important files, and tied up plant types with bits of string and rope she had saved in the face of ridicule.

When her friend arrived at her side, she was knotting together other pieces of string and rope. Asking her companion to lower the laboratory treasures from a window, she returned to the street to receive them. This done, she providentially found an expressman and explained her need of transportation.

"Cost you a heap!!" the man warned.

She agreed without betraying the slimness of her purse. With her goods loaded on the wagon, she took a seat beside the driver and rode with him to temporary safety, just ahead of the flames that gutted the Academy building. At her home she talked her helper into carrying the heaviest loot to the front porch; then apprehensively asked charges.

"Miss," the expressman said with a grin, "for anyone with your spunk—three dollars." And he could have demanded a king's ransom that day! The last she saw of him, this knight was galloping away into the smoke.

Later, when the fire advanced on her home, Miss Eastwood fled again with her specimens. Then came an enforced vacation. The burned-out Academy now could do no more than plan for the future. Miss Eastwood used this period to dash away on tramping and horseback explorations throughout the West, and to the Yukon, Mexico and Lower California. Anxious to study the collections of early scientific explorers of Western and North America at the Kew Gardens, she went to England.

But when the Academy's new buildings were completed in Golden Gate Park in (Continued on page 392)

CAPE ROMAIN

(Continued from page 356)

the turkey food, and that is a management problem, and then the wily raccoon inserts his black paws into the picture by eating the turkey eggs. When the refuge manager contemplates this depredation by warring on the raccoon the animal-lovers protest loudly that the raccoon is a gentle beast and would not harm a single egg. And that is another excellent example of the broad scope of the phrase "wildlife management."

Not content with turkey eggs, the raccoon preys upon another interesting refuge inhabitant, the loggerhead turtle, which comes ashore in droves during moonlit nights in May and June to lay its eggs on the beach. On a quarter-mile of beach last year 99 turtle nests were counted, with a guestimate of about 125 eggs to the nest. That should have produced quite a crop of young ones, but Mr. Raccoon thinks nothing of ganging up with his fellows to stand behind an egg-laying turtle and seize the eggs almost as she drops them.

To keep the human predator at bay the Fish and Wildlife Service has erected four tall, steel towers at strategic points in the refuge. Visitors think these have something to do with bird watching, but not so. From them refuge guardians can watch the human birds who tend to sneak into the refuge occasionally for a shot at a marsh hen, or a duck, or a snatch at a nest of turtle eggs. During the war these towers were manned by the Coast Guard in their watch for submarine activity, and it is the proud legend of the refuge that they proved useful in the pinpointing and subsequent destruction of some of these enemy weapons.

The island has one drawback for it is rich in wood ticks. During the cool weather the ticks remain in abeyance, but with the coming of spring they occur in such quantity that it is impossible to step off any pathway without picking up some of these burrowing pests. Some of them are even impervious to high-powered insecticides, and use of some of these poisons would so greatly endanger other insects upon which the birds must feed that no satisfactory fight can be made against the ticks.

For if the insects were destroyed Bull's Island might lose its painted buntings, which are so eagerly sought after by bird watchers and photographers. So this is another management problem with which the four men at Cape Romain must cope in their ceaseless battle to maintain this remarkable refuge.

Arrangements and reservations for transportation by government boat and accommodation at the Dominic House lodge may be made by mail through the Refuge Manager, Cape Romain National Wildlife Refuge, McClellansville, South Carolina. Boat departure times are governed by the tide and it may be necessary to wait over night in McClellansville. The refuge manager will arrange comfortable accommoda-

tions in town when necessary, if he is asked to do so. This reserving is entirely a courtesy on the part of a very busy public servant, a thought to keep in mind when writing.

Reservations for the twice-weekly Audubon Society's trips may be made through the society's national office, 1000 Fifth Avenue, New York City, 28. These group trips, under the guidance of the distinguished bird man, Alexander Sprunt Jr., leave from Charleston. The fee is \$15 per person plus charges for accommodation on Bull's Island.

Room and meals on the island are \$6 per day. Passage to the island by government boat is free. Boats may be chartered locally for off-schedule runs to and from the island. They are expensive.

PLANT HUNTING ON AN ISLAND

(Continued from page 360)

"The dune was almost a mile from my cabin then," he said, "and I thought I could protect the flower if I brought it home, but now the dune is here, too." He patted the smooth trunk affectionately. "It is such a pretty flower!"

We saw his eyes drop to the ground, where already the sand was starting to encircle the base of the tree. We knew that he was seeing the dune creeping up, hour by hour and day by day, gradually smothering the leaves and the flowers until it would choke the last breath of life from the gallant plant.

Russian John did not know it, but his "pretty flower" was one of a race that has puzzled botanists for all of the many years since the Channel Islands were first searched over for plants. Eighteen species of *Lavatera* are found native to the Mediterranean, one in Australia, and, except for four varieties on the Channel Islands of California, not a single species is indigenous to the American continent.

Writing in the *Botanical Gazette* in 1886, William S. Lyon laid particular emphasis on the mystery of San Clemente's lavateras.

"It is commonly known," he wrote, "that very many plants with skillful manipulation improve under cultivation. . . This is anything but the case with *Lavatera assurgentiflora*, which I collected on San Clemente from larger plants, in finer foliage and greater size and brilliancy of flower than anything observed in gardens. Its introduction into cultivation must forever be a bar to its complete extirpation; yet the natural tendency of the species I think we can show to be on the decline or toward extinction. Sealers report that, once abundant on Anacapa and San Nicholas, it is now scarce; on Clemente it was only observed in two localities, and only one or two plants in each; yet, only a dozen years ago (1874) it constituted un-

broken forest, extending for miles upon the high plateaus."

After the scientists have had their say, and the learned minds of two hemispheres have accorded the matter their most searching study, the fact remains that Russian John's protege was the last specimen of *Lavatera* left on San Clemente.

Recently I talked with a fisherman who knew San Clemente well. He said that the advancing dune had at last forced Russian John to abandon the simple little home he had loved so well.

"For the last year or so," said my fisherman friend, "John spent most of his time trying to keep the dune swept out of his yard. But you can't fight a sand dune. I don't see why he stayed as long as he did."

One reason he had stayed, I knew, was because of a "pretty flower" he had once rescued from that same advancing dune. His abandonment of the cabin could mean only one thing—San Clemente's *Lavatera* chapter was closed.

ALICE EASTWOOD

(Continued from page 362)

1916, Miss Eastwood eagerly returned to her job. One of her first innovations was a living flower exhibit, a flower show that, still continued, is probably one of the oldest on record. And her fire-salvaged specimens formed an invaluable nucleus for future collecting.

To expressions of gratitude from Academy and city officials for her work in the fire, she replied simply: "It was a joy to me while I did it, and I can still have the same joy in starting it [the collection] again. . . The kindness of my friends has been great. I didn't know I had so many or that their affection for me was so warm and sincere. How fortunate I am!"

This from a woman who had lost all personal possessions in the fire—home, everything!

At their "Alice Eastwood Semi-Centennial," Academy officials printed this program tribute: "In this great and devastating holocaust [the fire of 1906], Alice Eastwood gave ample evidence of her spirit and courage. It was through her initiative and bravery that most of those Academy possessions. . . were saved. These included hundreds of botanical types, specimens that would be irreplaceable if destroyed. . ." The account went on to comment on Miss Eastwood's prudence in having had valuable specimens segregated from the main collection "so that they might be secured immediately in just such an emergency," a custom now thoroughly established in most herbariums throughout the country.

State agriculture officials have consulted Miss Eastwood on perplexing problems of Nature. Universities have asked her advice. Scientific societies throughout the world have sought her membership.